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IT Backsourcing: is it the solution to innovation?

"IT backsourcing… best for the long term growth and success of our company, as well as our shareholders. Our new capabilities will give us competitive advantages, accelerate innovation, and enable us to become more streamlined and efficient."

Austin Adams, CIO, JP Morgan Chase, The Register, September 2004

ABSTRACT

This research paper explores a relatively unknown field, the notion of backsourcing in the context of innovation. It explores the relationship between the services supplied by IT vendors and the demand of firms in the financial services sector for innovation-driven business solutions to lead them out of recession and provides reasons for what motivates the backsourcing decision and suggests best practices for backsourcing. The likely future effects of a shift to more backsourcing are also examined.

A range of managerial economics, strategic, management and innovation theories are applied to the backsourcing phenomena in the context of innovation, including Total Innovation Management (TIM), Porter's generic value chain and Hanson and Birkinshaw's innovation value chain.

This paper is of particular interest to those responsible for innovation, IT sourcing decisions and vendors of IT services.

JEL CLASSIFICATIONS

D23   MICROECONOMICS

Production and organizations – organizational behavior

F16   INTERNATIONAL ECONOMICS

Trade – trade and labor market interactions

J22   LABOUR AND DEMOGRAPHIC ECONOMICS

Demand and supply of labor – time allocation and labor supply

J24   LABOUR AND DEMOGRAPHIC ECONOMICS

Demand and supply of labor – human capital; skills

L14   INDUSTRIAL ORGANIZATION

Market structure, firm strategy, and market performance – transactional relationships; contracts and reputation; networks

M14   BUSINESS ADMINISTRATION AND BUSINESS ECONOMICS

Business administration – corporate culture

M15   BUSINESS ADMINISTRATION AND BUSINESS ECONOMICS

Business administration – IT management

M54   BUSINESS ADMINISTRATION AND BUSINESS ECONOMICS

Personnel economics – labor management

O31   ECONOMIC DEVELOPMENT, TECHNOLOGICAL CHANGE, AND GROWTH

Technological change; research and development – innovation and invention: processes and incentives

O32   ECONOMIC DEVELOPMENT, TECHNOLOGICAL CHANGE, AND GROWTH

Technological change; research and development – management of technological innovation and R&D

ABOUT THE AUTHOR

Julie Beardsell has over 20 years' experience in diverse business and technology-related fields, ten years of which have been gained at Europe's top international IT services providers where she specializes in leading large and strategic international outsourcing and client engagements. Julie is holder of a Master of Philosophy Business Research Degree (MPhil) from Northumbria University Business School and has a Teacher Certificate in Education from Portsmouth University, UK. She is in the final stage of completion of her Doctorate in Business Administration at Swiss Management Center University and is author of several publications.

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INTRODUCTION

The process of bringing IT operations back in-house after they have been outsourced as the outsourcing contract expires or is terminated is termed 'Backsourcing' or 'Insourcing'. Although this may be a temporary trend in some organizations, there is limited understanding of the future effects of such a move and the extent to which a backsourcing strategy will positively or negatively influence a firm's innovative capability.

There is evidence to suggest that some firms implementing a backsourcing strategy are doing so due to disappointment at the level of innovation delivered through their existing relationships with IT services vendors. There are many reasons for dissatisfaction in the outsourcing engagement, ranging from poorly structured contracts, to relationship and delivery problems, behavioral aspects of the client and the service provider to a lack of innovation.

According to IT analyst Forrester (2008)[1], many IT outsourcing decision-makers are finding themselves under even more pressure to deliver short-term cost savings, whilst simultaneously improving support for the business. In 2005, research conducted by DiamondCluster[2] international revealed that in the twelve months previous to the study, about 50 percent of the organizations under investigation "had abnormally terminated an outsourcing relationship". In other words, IT contracts primarily concluded were terminated before their regular expiration. The fact that this considerable number of IT projects failed, certainly confirms the relevance of backsourcing as a future IT topic.

Technology led innovation and changing customer needs are leading banks and insurers to rethink the way that they do business in the future and with this, innovation, is taking center stage as to enable the necessary change.

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[1] Moore, S., Ferrusi, C., & Karcher, P. (2008, October 15). *Offshore Outsourcing: Things to consider when firing your provider*. Forrester.

[2] DiamondCluster International, Inc. (2006, Spring). *DiamondCluster 2005 Global IT Outsourcing Study*. <http://www.diamondconsultants.com/PublicSite/ideas/perspectives/downloads/Diamond2005OutsourcingStudy.pdf> (Accessed on 3 January 2010).

This paper explores the nature of backsourcing, the motivators to do so and whether or not backsourcing is likely to improve the firm's innovative capability.

"I have come to the conclusion that my subjective account of my motivation is largely mythical on almost all occasions. I don't know why I do things."

J.B.S. Haldane (1892 - 1964)

What is backsourcing?

'Backsourcing', which is often also referred to as 'insourcing', is the process of bringing previously outsourced IT functions back in-house, after they have been outsourced, as the outsourcing contracts expire or are terminated before the expiry date. Backsourcing results from a variety of circumstances, including a project or service contract not living up to expectations and the customer pulling the supposedly mishandled IT responsibility back in-house. Since backsourcing typically represents a decision to end an existing outsourcing relationship and to bring outsourced IT back in-house, such a shift can be understood as a result of dissatisfaction in the outsourcing engagement.
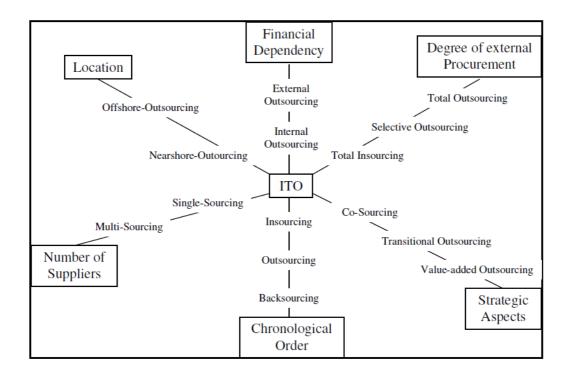

Figure I: IT-Sourcing-Map (adapted from von Jouanne-Diedrich)

The IT sourcing map adapted from Jouanne-Diedrich (2005)[3], shows factors which influence the IT sourcing decision including the number of suppliers, sourcing location, strategic aspects and the chronological order; Backsourcing falling under the 'Chronological Order' category, after the IT has been outsourced.

Hirschheim and Lacity (1998)[4] have carried out considerable research in the field of outsourcing. "The result of our research in outsourcing showed, at least in our own minds, that outsourcing was not all it was cracked up to be," according Hirschheim. "The press reported outsourcing arrangements during what we call the honeymoon period, the first year or even first month or two of an outsourcing deal when both vendor and client are happy and talking highly of one another. They never reported what happened to companies some time into their implementation."

However, as we will explore later, the reason for such dissatisfaction is not necessarily due to poor delivery on the part of the vendor, but can result from a variety of reasons over which the vendor has limited influence.

When does backsourcing take place?

Backsourcing is typical in two cases: firstly, when firms have (or can cost-effectively acquire) relevant knowledge of the IT enabled services for its own organization, sometimes this is done in conjunction with the IT supplier (inter-firm expertise) and secondly, when the required expertise already exists within the firm (within-firm shared expertise), for example, where a certain unique competency can be fully developed into a service center such as a bank creating its own service center of expertise in mobile technology.

Economic theories that attempt to explain why business organizers choose one structure rather than another; governance by contractual agreement, for example, rather than governance within a firm; are called "theories of the firm". Among the most well-accepted ideas in the "theory of the firm" literature is that productive activities will tend to be carried out within a single firm, governed by hierarchical

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[3] Von Jouanne-Diedrich, H., Zarnekow, R., & Brenner, W. (2005). Industrialisierung des IT-Sourcings.

[4] Hirschheim, R., & Lacity, M. (1998). *Backsourcing: An Emerging Trend?* Outsourcing.

decision-making, when the "transaction costs" associated with using markets or contracts is higher than the costs of using internal hierarchy. If this is correct, then the widespread shift among multinational companies toward outsourcing – in which production activities that had previously been carried out within a vertically integrated firm are arranged through one or more contracts across a "supply chain" of external organizations – suggests that either the cost of contracting has fallen substantially relative to internal governance in a variety of different settings, or the cost of internal governance has risen.

Although economists have been studying the theory of the firm for nearly a century[5], neither theorists nor empirical researchers have reached agreement about the primary factors that cause business organizers to buy some inputs in spot markets, while they form long-term contracts for other inputs, and generate still other inputs from within their firm. Theories of the firm traditionally suggests that firms determine their boundaries by choosing whether to "make" or "buy" individual components or inputs, for example, Coase (1937)[6] and Williamson (1975)[7]. Most economists agree with Coase that the choice of whether to "make" or "buy" an input probably has something to do with the relative transactions costs associated with each approach. But they have not further agreed about what factors cause transactions costs to be higher in markets than in internal production (or vice versa).

Firms often need to "make" in order to "know", but can partially outsource if they don't possess sufficient expertise or find it cost-effective to do so. This phenomenon is explored in economics in the resource-based view (RBV) which is a theory used to determine the strategic resources available to a firm. According to Wernerfelt (1984)[8] and Rumelt (2002)[9], the fundamental principle of the RBV is that the basis for a competitive advantage of a firm lies primarily in the application of the bundle of valuable

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[5] Knight, F.H. (1921). *Risk, Uncertainty, and Profit.* Hart, Schaffner, and Marx Prize Essays, no. 31. Boston and New York: Houghton Mifflin.

[6] Coase, R.H. (1937). The nature of the firm. *Organizational Economics: Toward a New Paradigm for Understanding and Studying Organizations,* Barney, J.B., Ouchi, W.G. (Eds). Jossey-Bass Inc: San Francisco CA.

[7] Williamson, O.E. (1975). *Markets and Hierarchies: Analysis and Antitrust Implications.* The Free Press: New York.

[8] Wernerfelt, B. (1984). The Resource-Based View of the Firm. *Strategic Management Journal*, 5(2), 171–180.

[9] Rumelt, D.P. (2002). *Alternative theories of the firm.* Elgar Reference Collection. International Library of Critical Writings in Economics, 154, 286–300, Massachusetts.

resources at the firm's disposal. In practice, this translates into valuable resources that are neither perfectly imitable nor substitutable without great effort, according to Hoopes (2003)[10] and Barney (1991)[11]. If these conditions hold, the firm's bundle of resources can assist the firm sustaining above average returns.

The resource-based view supports the idea that low strategic value activities such as IT services will be outsourced, and high strategic value activities will be insourced. This view is typically applicable in cases of a business driven cost saving logic, whereby the concept of economic rent (labor costs) and the view of the company as a collection of capabilities apply. The concept is explored extensively by John Kay (2003)[12].

Whilst the resource-based perspective highlights the need for a fit between the external market context and the internal goals of the firm, Michael Porter's five forces model (2008)[13] focuses entirely on the company's external competitive environment. It does not attempt to look inside the company. So it can be seen that a number of models found in economics theory can be useful in providing explanations for a firm's sourcing strategy.

Backsourcing takes place, according to both internal and external influencing factors on the firm which influence its sourcing strategy. Hitt, Ireland and Hoskisson (2004)[14] state: "The business strategy chosen should allow the firm to best exploit its core competencies relative to opportunities in the external environment."

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[10] Hoopes, D.G., Madsen, T.L., & Walker, G. (2003). Guest Editors' Introduction to the Special Issue: Why is There a Resource-Based View? Toward a Theory of Competitive Heterogeneity. *Strategic Management Journal*, 24, 889–902.

[11] Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99-120.

[12] Kay, J. (2003). Strategy and the Delusion of Grand Designs. *Financial Times*.
http://www1.ximb.ac.in/users/fac/dpdash/dpdash.nsf/pages/BP_Delusion (Accessed on 30 January 2010).

[13] Porter, M.E. (2008, Jan). The Five Competitive Forces that Shape Strategy. *Harvard Business Review*. Massachusetts: Harvard Business Publishing.

[14] Hitt, M.A., Ireland, R.D., & Hoskisson, R.E. (2004). *Strategic Management: Competitiveness and Globalization, Concepts and Cases.* South-Western Cengage Learning, Ohio: Mason.

Motivators for the backsourcing decision

As firms outsource, the expectation is that the focus on innovation is strengthened, costs will decline and efficiencies will increase. The trend was clear and the market worldwide reflected this expectation, outsourcing being valued in 2008 at approximately $US 256 million. Interestingly enough, exactly the same arguments are quoted as motivators for backsourcing, so such a phenomenon is clearly worth exploring.

However, according to Hirschheim (2000)[15], as contracts end, many of the companies are pulling their IT functions back in-house. Since the number of organizations that backsource is on the rise, it is important to know the types of strategy organizations could employ to ensure successful implementation of backsourcing.

According to Hirschheim (1995)[16], "Many companies that have gone through large scale outsourcing exercises are finding that their flexibility is not as enhanced as they thought it would be with outsourcing, and that service levels they thought would improve have actually dropped. They're beginning to find that outsourcing is not the panacea they hoped for when they initially outsourced."

Strassmann (2006)[17] analyzed detailed financial information concerning firms that outsourced more than half of their computing resources, from 1996 to 2000. He found that each of them had delivered declining returns in shareholder equity. This raises the question of whether the outsourcing of IT is the cause of the decline or whether it is a symptom of outsourcing being used as a mechanism by business in trouble, as an attempt to reduce costs and get its IT under control. Some authors cite several concerns over outsourcing, such as loss of IT control and a negative impact on employee morale. Lacity and Hirschheim (1995)[10] have identified several reasons for cost increase. According to De Rose (1997)[18], outsourcing has been found to be "difficult to control, costly, with a poor quality and service performance."

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[15] Hirschheim, R., & Lacity, M.C. (2000). The Myths and Realities of Information Technology Insourcing. *Communications of the ACM, 43*(2), 99-107.

[16] Lacity, M.C., & Hirschheim, R. (1995). *Beyond the Information Systems Outsourcing Bandwagon: the insourcing response.* Chichester: John Wiley & Sons.

[17] Strassmann, P.A. (2006). *Is Outsourcing Profitable?* Lecture. George Mason University.

[18] De Rose, L.J. (1997). The downside to outsourcing. *Electronic Buyer News*, 14.

So what's at stake? In the past, when Indian providers failed to perform, the impact of an outsourcing engagement was minimal for most companies. According to Forrester analysis, Moore (2008)[19], failures today are more expensive and more commonplace for the following reasons:

- Providers are working on more critical projects. Failures in these projects can be painful and embarrassing to stakeholders and potentially can have a significant financial impact on the business.

- Failure or underperformance is now more prevalent. As resource constraints and skyrocketing growth handicap providers, the quality of resources deployed to projects and the quality of account and project management has suffered.

- Costs have gone up. Hourly rates have increased; overhead costs have gone up; and the dollar has been falling against the rupee.

Gartner's Niccolai (2005)[20] published a report in Computerworld, identified five reasons why offshore deals go bust: "unrealized cost savings, loss of productivity, poor commitments and communications, cultural differences, and lack of offshore readiness and expertise." The two most important difficulties are the cultural differences leading to customer dissatisfaction and the language barrier. Although the cultural implications are not specifically explored in this paper, this is an important topic in its own right which is addressed in other work by the author.

Typically a number of factors come together to contribute to a backsourcing decision as follows:

1. Cost efficiency – outsourcing being considered relatively expensive from a governance perspective.

2. Control – senior executives having the uneasy feeling that they could no longer control what was happening in IT.

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[19] Moore, S., Ferrusi, C., & Karcher, P. (2008, October 15). *Offshore Outsourcing: Things to consider when firing your provider*. Forrester.

[20] Niccolai, J. (2005, June 22). Gartner: Five reasons why offshore deals go bust. *Computerworld*. <http://www.computerworld.com/s/article/102677/Gartner_Five_reasons_why_offshore_deals_go_bust> (Accessed on 3 January 2010).

3. Economies of scale – the economies of scale that outsourcers could get in buying new technology or software licenses are not necessarily better than those gained by the negotiation power of large non-IT firms.

4. Outsourcing does not get rid of the problem – the portrayal of outsourcing in the media, that outsourcing is the solution to IT problems, is not necessarily the case in practise, as such an engagement can simply transfer the set of problems from the in-house provider to the external provider. By bringing IT back in-house, firms may feel better positioned to confront IT issues head-on.

5. Changes in the strategic direction of the firm (business strategy) – these have impact on IT sourcing strategy (Hirschheim & Sabherwal, 2001)[21]. New business strategies to cope with the recent crisis, such as downsizing may trigger the decision to backsource IT functions.

6. Changes in IT role – changes in the positioning and importance of IT within the organization from a "commodity" to a "strategic tool" may motivate organizations to bring IT functions back in-house, where it may be easier to position it closer to the business. Such a transaction brings about a shift in perception on the part of management of "outsource commodities and insource strategic component" (Dibbern, 2004)[22]. Once the importance of IT is recognized then it is not be surprising to see organizations adjust their sourcing strategy.

The factors that contribute to a decision to backsource may also vary according to the decision making level, be it Strategic, Tactical or Operational level. If a firm has a strategic focus on growth, it can apply a tactical strategy focusing on innovation, in order to differentiate its products from the competition and achieve competitive advantage when entering new markets. This is typically seen in the major banks' efforts to take advantage of the trend in mobile telephones to provide real-time banking services, all accessible via a mobile telephone. Such innovation has been particularly well adopted in Asian

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[21] Hirschheim, R.A., & Sabherwal, R. (2001). Detours in the Path toward Strategic Information Systems Alignment. *California Management Review,* 44(1), 87-108.

[22] Dibbern, J., Goles, T., Hirschheim, R.A., & Jayatilaka, B. (2004). Information Systems Outsourcing: A Survey and Analysis of the Literature. *Database,* 35(4), 6-102.

markets where there is a strong cultural adoption for mobile telephony as medium for a range of functionality in addition to traditional telephony.

As an example, let's take Rabobank, one of the major Dutch based banks. Strategically, Rabobank endorsed its innovation focused strategy through its establishment of the Herman Wijffels fund, when the former Chairman of the Executive Board retired in 1999. The fund has the mission of supporting initiatives that promote co-operative and socially responsible entrepreneurship spearheaded by the Herman Wijffels Innovation Award, an incentive designed to enable sustainable innovations. In the ten years since its institution, the award has grown into one of the most prestigious innovation awards in The Netherlands. Tactically, time-to-market is a key driver, to ensure the firm is perceived by its customers as being innovative and the first one 'out there' with new products. Operationally, Rabobank outsources certain standard IT services on a selective basis, as opposed to an integral outsourcing of the entire IT operation, such as has been the case with ABN AMRO and ING in the past.

In the matrix below, Wong (2008)[23] provides a grouping of the reasons for backsourcing under three broad categories: (1) outsourcing expectation gaps, (2) internal organizational changes and (2) external environmental changes. These, in turn, are broken down into more specific categories, many of which have been just discussed. This is a useful grouping, particularly as it reflects the reality of the fact that outsourcing engagements tend to be long-term in nature, for example 5 – 9 years. In this way, it is realistic to expect that such contracts will be subject to change over time. Of course, what is important to the business is to ensure that whatever the model used to provide the necessary IT services, an effective mechanism to identify, implement and monitor change, is incorporated into the engagement.

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[23] Wong, S.F. (2008). Understanding IT Backsourcing Decision. *Communications of the IBIMA*, 2. Petaling Jaya: Malaysia.

Coding Category		Descriptions
Outsourcing expectation gaps	Cost	Any mention of costs (e.g., cost escalation, non-competitive cost structure, etc)
	Service quality	Any mention of service quality issues (e.g., inefficiency, slow services, unsatisfactory performance, etc).
	Loss of control	Any mention of control loss (e.g., inability to control vendors, loss control of IT processes, loss of flexibility, etc)
	Knowledge mismatch	Any mention of vendor's failure to maintain expertise in the outsourced area or incompetency in providing the services
	No access to state-of-the-art latest technology	Any mention of the stage of the technology provided by vendor, the architecture, the infrastructure, etc
Internal organizational changes	New management	Any mention of new people joining the top management group for strategic decision making (e.g., new CIO, directors of IT, CFO, CEO, etc)
	Changes in strategic directions	Any mention of the changes in organizational strategic directions (e.g., focus on growth, focus on expansion, downsizing, etc)
	Changes in IT role	Any mention of the changes in IT role (e.g., IT as a cost center, IT as a strategic tool, etc)
External environmental changes	Changes in the external environment	Any mention of the changes in the industrial structure (e.g., increasing competition, acquisition, merger, alliance, new governmental policies, etc)

Figure II: Grouping the reasons for backsourcing (Wong)

In the chart below, the author suggests both Intrinsic and Extrinsic reasons for backsourcing of firms in the financial services market sector, clearly there is an element of intrinsic disappointment, which is likely in a situation where expectations are not met for one reason or another.

Company	Core business area	Intrinsic	Extrinsic
Abbey	Banking	• Cultural differences	• Change in IT strategy due to acquisition / merger
ABN AMRO	Banking	• Fails to achieve its promise	
Capital One	Banking	• No reduced costs	• Change in IT strategy
Conseco	Insurance and annuity	• No reduced costs • No improved quality	• Fails to achieve its promise
JP Morgan	Commercial and investment banking	• Fails to achieve its promise	• Change in IT strategy due to acquisition / merger
Lehman Brothers (filed for bankruptcy)	Banking	• No reduced costs • No competitive advantage	
Nationale Nederlanden	Insurance	• No reduced costs	• Change in IT strategy
Royal Bank of Scotland	Banking	• Requirements have changed	• Change in IT strategy due to acquisition / merger • Requirements have changed
Sun Corp	Banking and insurance	• Vendor not performing its obligations • Change in IT strategy due to acquisition / merger	• Change in IT strategy due to acquisition / merger

Figure III: Suggested reasons for backsourcing in the financial services market sector (Beardsell)

The JP Morgan case

To conclude this chapter, the JP Morgan case, provides an interesting example of how an extrinsic factor, a change in IT strategy due to acquisition, seriously impacted the firm. What can be learned from this example is that firms should take their sourcing strategy seriously, and should up-front, before entering the outsourcing engagement, define a strategy for a possible transition to alternative sourcing engagement models such as bringing IT in-house and multi-vendor or singly supply engagement models. The costs to firms that fail to do this can be significant, not only in financial terms such as penalty fees, but in terms of loss of valuable human resources and the unique, firm-specific business knowledge to execute the firm's innovation strategy going forward after the backsourcing strategy commences.

In December 2002, JP Morgan agreed on a seven year IT outsourcing plan with IBM. The US$5 billion outsourcing engagement was decided on the basis of potential benefits such as increased innovation, reduced costs, improved quality, more efficient growth, and benefits for JP Morgan IT workers. The arrangement was to shift a major part of JP Morgan's IT services infrastructure which included data centers, help desks and data and voice networks to IBM. Part of the engagement involved the transfer of 4000 IT employees to IBM. It was touted as the largest outsourcing engagement in history.

However, in less than two years Chicago-based Bank One bought JP Morgan for approximately US$58 billion, resulting in a merger aiming at reducing JPMorgan's dependence on investment banking. Bank One believed it could manage technology in-house and was well experienced at integrating systems from acquired businesses. The decision was made in September 2004 to end the IT services contract early. The company claimed that IT backsourcing would be "best for the long term growth and success of our company, as well as our shareholders. Our new capabilities will give us competitive advantages, accelerate innovation, and enable us to become more streamlined and efficient."[24] JP Morgan's management gave the same reasons for the backsourcing decision that they had given when signing the outsourcing deal with IBM. This made some employees confused and resentful and contributed to poor morale and the loss of employee trust amongst the affected staff that were to be transferred back to JP Morgan. Most experts felt that bringing IT back in-house was a good decision. Nevertheless, it was a costly and complex move. The time spent in first preparing the organization for the outsourcing engagement and then restructuring again to bring the IT work back in-house was wasteful and caused huge disruption to the organization. Most IT related projects and day-to-day activities almost came to a standstill. Lack of IT services was a serious problem. Technology was not updated and new projects were not scheduled. JP Morgan likely had such provisions in its contract with IBM, but still had to pay millions to end the contract early.

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[24] Austin Adams, CIO, JP Morgan Chase, The Register, September 2004.

PART II: Innovation happens everywhere

"I do not want my house to be walled in on all sides and my windows to be stuffed. I want the cultures of all the lands to be blown about my house as freely as possible. But I refuse to be blown off my feet by any."

Gandhi, 1921

What do we mean by innovation?

To compete in today's competitive business world is increasingly a function of how proficient a company is at innovation. Innovation is ubiquitously recognized as one of the best sources for business growth and survival. Interestingly, until very recently the word 'Innovation' was associated only with research and development (R&D) and technology. But now innovation has come to mean much more, it includes any change, across and beyond the organization, which results in high impact and value creation.

Various definitions of innovation have emerged and evolved over the years. Rogers (1983)[25] defines innovation as "an idea, practice, or object that is perceived as new by individuals or units that adopt it". Damanpour (1991)[26] defines innovation as "the adoption of an internally generated or purchased device, system, policy, program, process, product, or service that is new to the adopting organisation". Jordan (2005)[27], principal from the Centre for Business Innovation, Boston says, "innovation is the pirate ship sailing into the yacht club". Drucker (Hesselbein, 2002)[28] refers to innovation as "change that creates a new dimension of performance".

Drucker suggests a number of outcomes of innovation including, the production of new goods, new methods of production, the creation of new demand, supply and markets, the creation of new human related technique, using new technology, or using new strategic management.

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[25] Rogers, E.M. (1983). Diffusion of innovations. 3rd ed. New York: Free Press.

[26] Damanpour, F. (1991). Organizational innovation: a meta-analysis of effects of determinants and moderators. *Academic Management Journal*, 34, 556.

[27] Jordan, J. (2005), Idea Works Consulting and principal from the Centre for Business Innovation. < http://www.ideaworksconsulting.com/innovation.html> (Accessed on 30 January 2010).

[28] Hesselbein, F., Goldsmith, M., & Somerville, I. (2002). The Drucker Foundation: Leading for Innovation: & Organizing For Results. San Francisco: Jossey-Bass.

Innovation is also something that is not constrained to the R&D department, the portfolio team or the Chief Technology Officer. It is happening throughout the organization and beyond into the firm's business ecosystem. According to Goldman and Gabriel (2005)[29], *innovation happens everywhere, but there is simply more elsewhere than here*… regardless of how smart, creative, and innovative the organization is perceived to be, there are more smart, creative, and innovative people outside the organization than inside.

Innovation networks are growing in importance. An innovation network is a web of people; institutions or companies outside of a firm that help it solve problems or come up with new ideas. Whist organizations have formed alliances and strategic partnerships for hundreds of years, experts say this web of connections is becoming increasingly important as part of a firm's business ecosystem.

Whatever definition is applied, and wherever it is happening; something more than the generation of a creative idea or insight is required for innovation: the insight must be put into action to make a genuine difference, resulting for example in new or altered business processes within the organization, or changes in the products and services provided in the market.

Innovation beyond 2010

It is very often said that "to be able to understand the future, you must know the past..."

Innovation has been on top of the business agenda for many years. In the 1980's competitive performance was the buzz word; whereby the focus was on changing processes and establishing benchmarks for upgraded performance. In the 1990's, innovation was about technology and control of quality and cost. The millennium innovation was about taking organizations that were built for efficiency and re-wiring them for business creativity. As a consequence of the bursting of the Internet bubble, innovation was no longer seen as a necessary evil, it matured into an integral part of growth and sustainability. Qingrui Xu (2002) illustrates the course of innovation in the chart below.

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[29] Goldman, R., & Gabriel, R.P. (2005). *Innovation Happens Elsewhere. Open Source as Business Strategy*. San Francisco: Morgan Kaufmann (Elsevier).

Development Course of Innovation Theory

Phase	Main Contention	Main Contributor	Theory Foundation
First Phase (1940s-1950s)	Individual Innovation; Innovation process Success factor	Myer Marquis(1969); Roy Rothwell*; Chris Freeman*	Newton Classical Mechanism
Second Phase (1960s-earlier1970s)	Organizational promotion R & D Management Interiors sources;	Ed. Roberts(1969); James Utterback	Newton Classical Mechanism
Third Phase (1970s)	Outsider Involved; User as Innovator	Eric Von Hippel（1976）	Newton Classical Mechanism
Fourth Phase (1980s-1990s)	Portfolio Innovation Integrated innovation Systematic Innovation	Rosenberg（1986） Rothwell（1992）;Menke; Qingrui Xu; Bin Guo; Jin Chen; Xiaobo Wu; Ling Su Kim	System Theroy
Fifth Phase（21st c)）	TIM	Rothwell（1994） Qingrui Xu（2002）Roger Bean; Shapiro（2002） Tucker（2002）	Ecosystem

Figure IV: Developmental course of innovation theory (Qingrui Xu)

So what will innovation look like beyond 2010? Certainly, innovation theory is evolving to consider the context of an organization's ecosystem. The business ecosystem is a strategic planning concept originated by James F. Moore and widely adopted in the IT community. The basic definition comes from Moore (1996)[30] who sets up a new metaphor for competition drawn from the study of biology and social systems. He suggests that a company be viewed not as a member of a single industry but as part of a business ecosystem that crosses a variety of industries. In a business ecosystem, companies "co-evolve" around a new innovation, working co-operatively and competitively to support new products and satisfy customer needs. In a large business environment, several ecosystems may vie for survival and dominance.

This economic community produces goods and services of value to customers, who are themselves members of the ecosystem. The member organizations also include suppliers, lead producers, competitors, and other stakeholders. Those companies holding leadership roles may change over time, but the function of ecosystem leader is valued by the community because it enables members to move toward shared visions to align their investments and to find mutually supportive roles.

[30] Moore, J.F. (1996). *The Death of Competition: Leadership and Strategy in the Age of Business Ecosystems*. HarperBusiness.

Based on an ecosystem view of innovation management and in-depth case studies of firms in China and abroad which are perceived as being successful in innovation, let us briefly explore a novel paradigm of innovation management, Total Innovation Management (TIM). This paradigm draws on three distinct areas of recent research, namely the innovation theory of the firm, the resource-based view (RBV), and the complexity theory. It introduces the theoretical framework of TIM, and presents a tri-dimensional innovation strategy model, which includes all elements of innovation, all innovators, and innovation in all times and spaces, and aims at value added and created.

Through analysing some successful companies active in innovation in and out of China, including Haier, 3M, HP, GE, Sony, Samsung, Nokia, BP and Honda, Qingrui Xu (2007)[31] identifies common characteristics in terms of the firms' treatment of innovation and identifies three key factors in TIM:

1. Pay attention to all innovation elements to some degree, not just technology innovation.
2. Integrate technology and non-technology (for example, strategy, organization, culture, institution, market etc).
3. Extend the time and space of innovation, implement perpetual innovation and integrate external resource for innovation, and implement R&D globalization.

Culture for innovation

The model below shows patterns of cultural type and how 'thinking' and 'intuition' are characteristics of an Innovative culture (top right in the matrix). Such a culture requires entrepreneurship and creativity, to be project-orientatated and have flexibility.

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[31] Qingrui Xu. (2007, April). Total Innovation Management: a novel paradigm of innovation management in the 21st century. The Journal of Technology Transfer. Springer Netherlands. 32, 1-2.

Cultural, organizational, technological innovation portfolio

THINKING

DISCIPLINARY CULTURE

- order, authority and efficiency
- role-oriented sensation

INNOVATIVE CULTURE

- entrepreneurship, creativity
- project-oriented
- flexibility

INTUITION

EFFECTIVE CULTURE

- competitiveness , goal accomplishment
- customer-oriented

PARTICIPATIVE CULTURE

- participation, belonging and a sense of family
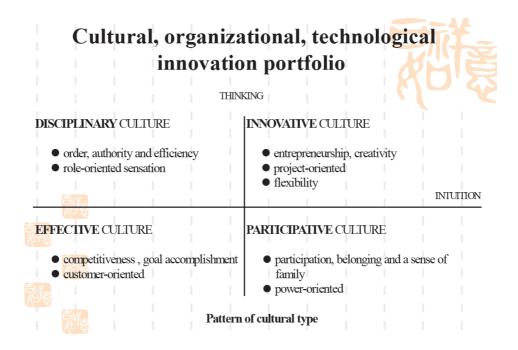- power-oriented

Pattern of cultural type

Figure V: Cultural, organizational, technological and innovation portfolio (Qingrui Xu)

TIM is not just an academic model, but it is a real transformation that demonstrates how the game can be won when "made in China" is transformed to "innovate in China". In this is surely inspiration for Western markets. Clearly this model is applicable to heavily product focused Chinese organizations. To be applicable in European and Western markets, the elements of 'service', 'collaboration' and 'transformational' need to be included as essential requirements of an effective Innovation culture.
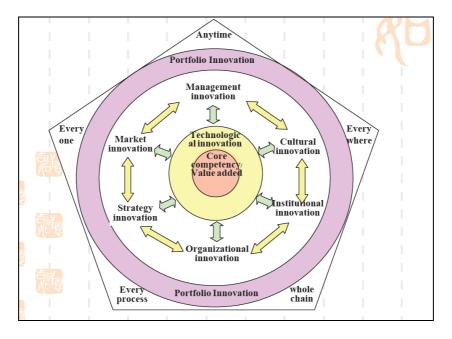
Figure VI: The Pentagon Model of Total Innovation Management (Qingrui Xu)

An Innovative culture needs *intellect*, *intuition* and an *ability to execute*. Important factors are the capability to spot opportunities, a culture that enables experimentation, learning to reduce uncertainty by developing a definitive vision of the outcome of innovation from a business value perspective and an intellectual roadmap to get there.

Qingrui Xu's Pentagon Model of Total Innovation Management provides a useful holistic view of the entire innovation portfolio, core competencies and added value being at the center of the model.

To innovate, it is necessary to break away from established patterns of behavior. Therefore the innovative organization has to be open to 'change'. In the context of the sourcing of IT services, where the methodology of approach is via contractual agreements and pre-defined service levels to determined what the vendor and client can expect from one another, the question of how, within the 'constraints' of such a service contract, innovation can ever be introduced. However, innovation and methodology are less antagonistic than they may seem and we will explore this further in the next chapter.

Drucker (2002)[32] states that innovative organizations have certain characteristics in common:

1. They know what 'innovation' means.
2. They understand the dynamics of innovation.
3. They have an innovation strategy.
4. They know that innovation requires objective, goals and measurement of a managerial organization and appropriate to the dynamics of innovation.
5. Management, especially top management, plays a different role and has a different attitude in an innovative organization.
6. The innovative organization in structured differently and set up differently from managerial organization.

An innovation culture starts in the boardroom, or better still, with the Chief Innovation Officer. Senior managers must ensure that innovation becomes the lifeblood of the organization, rather than

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[32] Hesselbein, F., Goldsmith, M., & Somerville, I. (2002). The Drucker Foundation: Leading for Innovation: & Organizing For Results. San Francisco: Jossey-Bass.

something only addressed by the scientific gurus of the organization. To foster innovative behavior, an organization needs to find ways to encourage the right attitude. Organizational design plays a key role in this from a structural perspective and encouraging a "can-do, must-do" culture that is high energy, seemingly infectious, enforced by senior management and multi-disciplinary team working. Companies wanting to succeed in harnessing the power of innovation will have to work hard to create innovation cultures, but the reward for companies such as Apple, 3M, Google and IBM, is their ability to stand high above their competitors.

Without the existence of a culture, which encourages "out of the box" initiative, and the taking of risks, the organization's innovative lifeblood will dry-up, resulting in a struggle to compete in today's competitive business world.

PART III: Value chains as enablers for innovation

"Rather than reflexively importing innovation best practices, managers should adopt a tailored, end-to-end approach to generating, converting, and diffusing ideas."

Morten Hansen and Julian Birkinshaw

"Strategy has to do with what will make you unique," according to Porter (2006)[33]. Companies also make the mistake of confusing strategy with an action, such as a merger or an outsourcing agreement. "Is that a strategy? No. It doesn't tell what unique position you will occupy." Porter's theory of generic strategies for creating a sustainable competitive advantage is explored in terms of 'Differentiation Advantage', for example, when a firm, such as a Dutch bank or insurance company, as a result of an innovative IT supported strategy, delivers greater services for the same price of its competitors; collectively known as positional advantages because they denote the firm's position in its industry as a leader in either superior services or cost. In his book Competitive Advantage (1985)[34], Porter introduced a generic value chain model that comprises a sequence of activities found to be common to a wide range of firms, identifying primary and support activities as shown in the following diagram:
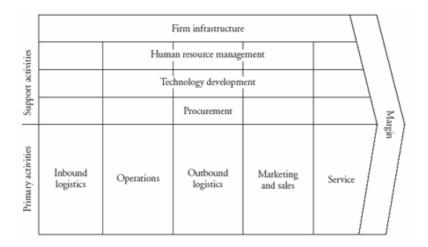

Figure VII: Generic value chain model (Porter)

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[33] Porter, M.E. (2006, November 01). Michael Porter Asks, and Answers: Why Do Good Managers Set Bad Strategies? *A Knowledge@Wharton Special Report.* <http://knowledge.wharton.upenn.edu/article.cfm?articleid=1594> (Accessed on 3 January 2010).

[34] Porter, M.E. (1985). *Competitive Advantage.* The Free Press: New York.

The firm's margin or profit then depends on its effectiveness in performing these activities efficiently, so that the amount that the customer is willing to pay for the products exceeds the cost of the activities in the value chain. It is in these activities that a firm has the opportunity to generate superior value. A competitive advantage may be achieved by reconfiguring the value chain to provide lower cost or better differentiation.

The value chain model is a useful analysis tool for defining a firm's core competencies and the activities in which it can pursue a competitive advantage and can assist firms in deciding what competencies are core or strategically so important to the business that they should remain in-house; as opposed to activities which may be considered to be of less strategic importance and perhaps more standardized and can be provided by an external services vendor. By focusing on those activities associated with core competencies and capabilities, a firm will attempt to perform them better than competitors.

If we apply the TIM theory here, then innovation would be applicable in Porter's value chain model to both Primary and Support activities. Thus, the discussion that innovation is so essential to the business that it can only be executed in-house, as opposed to through external vendors is invalid. Innovation happens everywhere. In practice, a firm may specialize in one or more value chain activities and outsource the rest. The extent to which a firm performs upstream and downstream activities is described by its degree of vertical integration. A thorough value chain analysis can illuminate the business system to facilitate sourcing decisions. To decide which activities to outsource or backsource, managers must understand the firm's strengths and weaknesses in each activity, both in terms of cost and ability to differentiate.

Hanson and Birkinshaw (2007)[35] argue that companies often fail in innovation because they don't recognize that innovation is a chain that requires strength at every link to succeed. "The challenges of coming up with fresh ideas and realizing profits from them are different for every company. One firm may excel at finding good ideas but have weak systems for bringing them to market. Another

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[35] Hanson, M.T., & Birkinshaw, J. (2007, Jun 01). Innovation Value Chain. *Harvard Business Review*. Massachusetts: Harvard Business Publishing.

organization may have a terrific process for funding and rolling out new products and services but a shortage of concepts to develop."

Hansen and Birkinshaw offer a useful framework for evaluating innovation performance: the innovation value chain. It comprises the three main phases of innovation (idea generation, conversion, and diffusion) as well as the critical activities performed during those phases (looking for ideas inside your unit; looking for them in other units; looking for them externally; selecting ideas; funding them; and promoting and spreading ideas companywide). Using this framework, managers get an end-to-end view of their innovation efforts. Companies typically succumb to one of three broad "weakest-link" scenarios. They are idea poor, conversion poor, or diffusion poor. The framework allows managers to pinpoint their weakest links and tailor innovation best practices appropriately to strengthen those links. Such a framework can be particularly helpful for forms in determining their sourcing strategy.

To innovate, it is necessary to break away from established patterns of behavior. The innovative organization has to be open to 'creativity'. In the context of the sourcing of IT services, where the methodology of an outsourcing business model is tied up in contractual agreements and the small, legally binding letters of framework and service level agreements, there may appear to be limited room for innovation. Outsourcing contracts are powerful devices for creating a visible and guarded boundary between activities that had formerly been carried out within a firm.

In any sourcing business model, success depends on harnessing innovation between the demand and supply side organizations, combining the professional experience of the ICT services vendors which, typically, have a track record of work closely with customers in diverse sectors and across diverse geographies; and the client who knows more about its core processes and its own businesses than anyone else.

PART IV: Backsourcing best practices

"I have not failed. I've just found 10,000 ways that won't work."

Thomas Edison (1847–1931)

The decision to outsource in the first place is a complex one to make and most organizations fear taking a backsourcing decision due to the potential disruption this can cause. In practice, backsourcing can negatively impact an organization in the following ways:

1. A costly and complex move, particularly to cover the costs of exiting the existing contract and the costs associated with higher attrition rates.
2. The time spent in first preparing the organization for the outsourcing and then restructuring again to bring the IT work back in-house can be time consuming and even a waste of time.
3. There is a risk to business continuity as projects and services may literally come to a stand-still as a number of decisions have to be made, particularly on the transfer of people and systems back to the firm, for example, how to manage legacy systems and bring the focus back to innovation, budget provision for new projects etc.
4. The firm may not have the necessary capabilities to manage the backsourcing 'transition'.
5. If management gives the same reasons for the backsourcing decision that they had given when signing the outsourcing deal, then this makes some employees confused and resentful, for example, the reason for the outsourcing decision may have been 'innovation' and the reason for insourcing may also 'innovation'.
6. Poor morale and the loss of employee trust.

The best time to think about backsourcing an IT function is before it is outsourced. Such provisions clearly state the terms by which the company can terminate the outsourcing contract and regain control of their operations in the event that outsourcing fails to meet expectations. What particular factors are likely to be responsible for ending the outsourcing relationship and what is the likelihood of these occurring? It may be recommended to carry out a risk analysis to provide detailed insight. Consider the penalties for termination of the outsourcing contract and which parties will incur them.

It is also important to recognize that in the duration of the existing service contract, the vendor is likely to have integrated (either partly or fully) the organization-specific services into a shared service center organization in which the provider is serving a range of clients. The effort and costs of 'disentanglement' of such services may be higher than expected, particularly if disentanglement is not in the interests of the vendor's business. Similarly, disentangling services provided in a multi vendor engagement can also be a time-consuming and costly exercise, because as a result of contract termination, the interests of the parties might shift away from the client.

Once a decision has been made to backsource, the following steps may not necessarily reduce the costs of bringing a large outsourcing deal back in-house, but they may ensure that the investment pays off long-term.

1.   Define up-front the goals and processes needed to drive innovation initiatives and achieve business goals

For a successful facilitation of innovation ideas and projects, the processes around identification, evaluation, approval, and implementation of innovative ideas need to be clearly defined. Ideas with great potential can be easily wasted without well-defined processes to take them forward through the approval filters. Consideration should be given to how innovation is mapped into the sourcing framework, be it in-or outsourcing. Set up an Innovation Board or Innovation Council, ensure budget for innovation to build on best practices – creating show cases and identify the necessary talent to nature innovation.

2.   Prepare a business case for backsourcing

If a business case indicates that backsourcing is the best option then how this happens is dependent on the type of business case. For backsourcing, Postma (2003)[36] differentiates between an intrinsic and an extrinsic business case, intrinsic being the focus on the internal factors that impact the case, such as a lack of maturity in governance of the contract, and extrinsic being the focus on external factors such as a change in strategy whereby the firm is taken over by another organization.

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[36] Postma, S. (2003). Inbesteding. *World Class IT Praktijkgids ICT Sourcing*, 6. Tutein Nolthenius.

3.   Full or partial backsourcing

It may be possible that not all projects and services are brought back in-house and that some activities remain delivered by vendors; so careful thought needs to be given to the necessary contractual and delivery framework.

4.   Inform beforehand

When the backsourcing course of action is decided upon, the outsourcer should be alerted beforehand. This helps promote a co-operative atmosphere as well as conform to any contractual commitments as well.

5.   Governance

It is important to consider the required governance framework that should be set up to manage the outsourcing engagement and how this would look in the event of a backsourcing scenario. Do the parties involved have access to the necessary skills to manage the sourcing agreement and are such costs identified and budgeted up front? Governance needs to be carefully worked out in multi vendor engagements, which can be tricky to manage when overseas parties are involved due to cultural and geographical disparity.

6.   Backsourcing transition and transformation plan

Ensure that a sound transition and transformation plan is created which takes into account the parallel track of the on-going as-is service contract situation and the transitional project needed for the to-be situation. Incorporate clauses to ensure that all assets are properly sourced / returned to the organization and ensure adequate support to the firm's staff for a specific timeframe until the firm can resume full operational control of the in-scope projects and services. Communicate the plan, goals and objectives to the enterprise and affected vendors. This will help gain the support and co-operation of internal and external parties affected by the change.

7.   Business continuity

A transition and transformation program may typically have a duration of 12 – 18 months, thus for business continuity the course of action for any unforeseen occurrences during the switch should be planned for and be included as part of the backsourcing transition and transformation plan.

8.   (Re-) assignment of people resourced

Decide upon employee reassignment and responsibilities as early as possible. This minimizes uncertainty and associated productivity and motivation concerns. Identify capabilities, projects and services, which may require sourcing from external suppliers.

9.   Security Policy and Procedures

To protect key information relevant security procedures need to be established, such as password protection and the documentation of procedures for the installation of new software.

10.   Adequate documentation and business continuity

Documenting operational audits and requirements analysis helps avoid any failure to meet the expectations and results of the sourcing scenario.

PART V: The likely future effects of a shift to more backsourcing

"The best way to predict the future is to invent it."

Alan Kay

As will be explored a little later, increases in backsourcing mark an interim phase in some firm's sourcing strategy and the effects of such a trend will lead to the following:

1. More firms will buy the IT service organization, such as those in India, as an extension (IT service center) to their existing business e.g. IBM.

2. Existing IT service vendors offshore will be under increased pressure to increase the business value of their services, for example, by offering more innovative service components to make their services more attractive to clients.

3. Vendors will need to fully understand the factors that lead to the backsourcing decision to formulate better their future marketing and service strategies in an effort to attract new clients as well as retain existing clients.

4. There will be an increase in the demand for services of independent outsourcing specialists to 'manage' backsourcing transition either on behalf of the client organization or in a service 'disintegration / disentanglement' role to support firms in the transition of shifting services back in-house.

5. Once firms have insourced IT, there may be a resources gap, particularly if attrition rates increase due to demotivation of the staff to be transferred back to the organization.

Five years ago, Dreyfuss of Gartner Research (2005)[37] predicted: "CIOs who master service transition programs from outsourcing to insourcing (and vice versa) will be able to appropriately support their companies' changing business objectives and strategies." This statement is still valid today and furthermore, due to the flexibility required by firms to adapt and evolve to the increasingly unpredictable pressures of the global marketplace, where IT services can be sourced from a wide

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[37] Dreyfuss, C. (2005, November 23). *How to Manage the Complex Transition From Outsourcing to Insourcing*. ID number: G00135617. Gartner, Inc.

choice of overseas markets. Innovation happens everywhere. Those determining the firm's sourcing strategy will need to understand what that means for their organization in terms of sourcing the necessary capability to drive innovation forward.

However, the shift in sourcing strategy to backsourcing is likely to be relatively short-lived; as new markets emerge from around the globe, offering a new breed of flexible, more business integrated service modules or components, for example, high-speed services to banks for the processing of payments enabling firms to benefit from improved cash flow for the business; challenging firms to review their sourcing strategy once more to take advantage of this new breed of service innovation.

CONCLUDING COMMENTS

"We cannot solve the problems we've created with the same thinking that created them."

Albert Einstein (1879–1955)

This paper is an initial step towards understanding the phenomena of backsourcing in the context of innovation. A search of literature reveals that there is very limited work published in this specific field. However, a broad range of economic, strategic and management theories are applicable to the business behaviour associated with backsourcing of IT services and innovation.

Expectations have been high that outsourcing of IT can solve a number of issues for firms; including cost reduction, improved scale and innovation. In practice, the extent to which such expectations have been met is questionable. To avoid disappointment, the deliverables and outcomes of an outsourcing engagement need to be defined up front and allow room for business change over time, particularly when concerning the area of innovation. Without a mechanism to allow for change to meet the evolving needs of business, the performance of the IT vendors will be limited to the terms and conditions written in the service contract, which are likely to be scoped by individuals who may have limited understanding of the business and the original strategic intention for innovation which was agreed in the handshake between the CXO demand and supply parties.

Motivators for backsourcing are very often the same factors that contribute to a decision to outsource in the first place. Backsourcing cannot enable innovation any more effectively than outsourcing per se. Innovation happens everywhere, regardless of the firm's sourcing strategy. What is essential, however, is the creation of a transformational culture that is supportive of innovation throughout the ecosystem of the firm; such a culture needs to stimulate entrepreneurialism, collaboration beyond the constraints of organizations and contracts and allow people the room to generate and execute new ideas, whilst at the same time providing a structured framework with clear innovation objectives. What we are seeing is that the transformational culture for innovation is lagging behind technology innovation.

Business strategy has to drive and steer a backsourcing program, as part of the firm's overall sourcing strategy. Serious interface problems exist between technology and market driven innovation. IT services providers need to better understand the business of their clients' in order to bridge the gap and not think in terms of IT innovation silos, but think in terms of IT enabled innovative business solutions.

Both external and internal factors influence the backsourcing decision. In a climate of high merger and takeover activity, then external business strategy will influence the decision to backsource, as seen in the example of JP Morgan; whilst changes in the positioning and importance of IT within the organization from a "commodity" to a "strategic tool" may motivate organizations to bring IT functions back in-house as an insourced strategic component, where it may be easier to position it closer to the business. Changes to the internal organizational structure such as new management joining the organizations or recognition of the strategic role of IT may also lead organizations to bring IT functions back in-house. Once the importance of IT is recognized then it is not be surprising to see organizations adjust their sourcing strategy.

An understanding of the factors that contribute to backsourcing decisions helps vendor managers to examine even more carefully the suitability of an outsourcing arrangement to their organizations. It also reminds them to build clearer clauses into SLAs should they choose to continue with outsourcing. The implementation plan should include both the process of transitioning from vendors to internal IT departments and the capability of internal IT departments to function optimally after the transitioning period, ensuring the necessary focus on innovation.

People need to be the critical focus of attention in a backsourcing transition, as knowledge about the firm needs to be protected and knowledge which is required to bring the firm's innovation strategy into practice should be nurtured, to prevent key people from becoming demotivated and leaving the organization.

To achieve innovation, organizations need to understand how to support and nurture it, for despite the many enthusiastic proclamations by CXOs, consultants, academics, and the media, the actual accomplishment of innovation requires constant engagement by creative forces against organizational bureaucracy, be this in the form of gatekeepers, outsourcing contracts and steering boards. The power

to invest in innovation lies with CXOs; whilst the creativity required in executing innovation comes from the knowledge and drive of smart individuals, mostly lower down the ranks. Such individuals may be external or internal to the firm, but this does not matter. What does matter is creating a framework to support and channel this knowledge to overcome the bureaucracy that can so easily exist in the management of outsourcing contracts.

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